Amendments To The Claims

This listing of claims will replace all prior versions of the claims and listing of the claims in the application:

Listing of Claims:

1. (Currently Amended) A compound of the following Formula I:

wherein

A is hydrogen or hydroxy;

B is selected from optionally substituted carbocyclic aryl and optionally substituted heteroalicyclic having from 3 to 8 ring atoms and at least 1 N, O or S ring atom or a heteroaromatic group having a single ring with 5 or 6 ring atoms and at least one N, O or S ring atom;

U is (CH₂)_p wherein p is selected from 0, 1 and 2;

V and Q are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, C₁-C₆ heteroalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, C₃-C₆ heterocycloalkyl C₁-C₆ alkyl, arylalkyl, -CR¹R²-W, wherein R¹ and

R² are independently selected from H, propyl, pentyl, substituted and C₁-C₆ alkyl; or R¹ and R² can form an C₃-C₆ cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, aryl and heteroaryl; with at least one of V and Q being other than hydrogen; and pharmaceutically acceptable salts thereof.

- 2. (Original) A compound of claim 1 wherein A is hydrogen.
- 3. (Previously Presented) A compound of claim 1 wherein B is optionally substituted carbocyclic aryl.

4. (Previously Presented) A compound of claim 1 wherein B is optionally substituted phenyl.

5. (Currently Amended) A compound of claim 1 having the following Formula II:

$$(R)_n$$

wherein R is C(=O)Z where Z is selected from hydrogen, hydroxy, optionally substituted alkoxy and optionally substituted alkyl; or R is amino or optionally substituted alkylamine;

X is selected from oxygen, sulfur, sulfinyl, sulfonyl and carbon; n is an integer selected from 0, 1, 2, 3, 4 and 5;

U is $(CH_2)_p$ wherein p is selected from 0, 1 and 2;

V and Q are each independently selected from hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, C₁-C₆ heteroalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, C₃-C₆ heterocycloalkyl C₁-C₆ alkyl, arylalkyl and -CR¹R²-W, wherein R¹ and R² are independently selected from H and C₁-C₆ alkyl; or R¹ and R² can form an C₃-C₆ cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, propyl, pentyl, substituted C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, aryl and heteroaryl; with at least one of V and Q being other than hydrogen; and pharmaceutically acceptable salts thereof.

- 6. (Original) A compound of claim 5 wherein n is 1 or 2.
- 7. (Currently Amended) A compound of claim 1 having the following Formula III:

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II

wherein R is C(=0)Z where Z is selected from hydrogen, hydroxy, optionally substituted alkoxy and optionally substituted alkyl; or R is amino or optionally substituted alkylamine:

U is $(CH_2)_p$ wherein p is selected from 0, 1 and 2;

V and Q are each independently selected from hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, C₁-C₆ heteroalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, C₃-C₆ heterocycloalkyl C₁-C₆ alkyl, arylalkyl and -CR¹R²-W, wherein R¹ and R² are independently selected from H and C₁-C₆ alkyl; or R¹ and R² can form an C₃-C₆ cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, propyl, pentyl, substituted C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, aryl and heteroaryl; with at least one of V and Q being other than hydrogen; and pharmaceutically acceptable salts thereof.

8. (Currently Amended) A compound of claim 1 having the following Formula IV:

wherein R is C(=O)Z where Z is selected from hydrogen, hydroxy, optionally substituted alkoxy and optionally substituted alkyl; or R is amino or optionally substituted alkylamine;

n is an integer selected from 0, 1, 2, 3, 4 and 5;

U is $(CH_2)_p$ wherein p is selected from 0, 1 and 2;

Q is optionally substituted from alkyl, preferably having 1 to about 12 carbon atoms, optionally substituted alkenyl preferably having 2 to about 12 carbon atoms, optionally substituted alkynyl preferably having from 2 to about 12 carbon atoms, C₁-C₆ heteroalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, C₃-C₆ heterocycloalkyl C₁-C₆ alkyl, aryl C₁-C₆ alkyl and -CR¹R²-W, wherein R¹ and R² are independently selected from H and C₁-C₆ alkyl; or R¹ and R² can form a C₃-C₆ cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, propyl, pentyl, substituted C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, aryl, heteroaryl and aryl C₁-C₆ alkyl; and pharmaceutically acceptable salts thereof.

U.S.S.N. 10/517,626 Attorney Docket No.: SNI-003US

9.

(Previously Presented) A compound of claim 1 wherein p is zero.

10. (Currently Amended) A compound of claim 1 having the following Formula V:

Examiner: J. M. Nolan

Group Art Unit: 1626

wherein R is C(=O)Z where Z is selected from hydrogen, hydroxy, optionally substituted alkoxy and optionally substituted alkyl; or R is amino or optionally substituted alkylamine;

n is an integer selected from 0, 1, 2, 3, 4 and 5;

Q is selected from optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, or optionally substituted arylalkyl, C_1 - C_6 heteroalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, C_3 - C_6 heterocycloalkyl C_1 - C_6 alkyl, aryl C_1 - C_6 alkyl and - CR^1R^2 -W, wherein R^1 and R^2 are independently selected from H and C_1 - C_6 alkyl; or R^1 and R^2 can form an C_3 - C_6 cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, <u>propyl</u>, <u>pentyl</u>, <u>substituted</u> C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, aryl, heteroaryl and aryl C_1 - C_6 alkyl; and pharmaceutically acceptable salts thereof.

- 11. (Original) A compound of claim 10 wherein n is 1 and R is a para-substituent.
- 12. (Original) A compound of claim 10 wherein R is -C(O)OH.
- 13. (Currently Amended) A compound of claim 10 wherein Q is straight or branched C_1 - C_{12} alkyl or optionally substituted arylalkyl.
- 14. (Currently Amended) A compound of claim 10 wherein R is -C(O)OH being in a "para" position whereby n is 1; Q is CR^1R^2 -W, wherein R^1 and R^2 are independently selected from H and C_1 - C_6 alkyl; or R^1 and R^2 can form an C_3 - C_6 cycloalkyl with the carbon they are attached to; W is selected from hydrogen, propyl, pentyl, substituted C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, aryl, heteroaryl and aryl C_1 - C_6 alkyl; and pharmaceutically acceptable salts thereof.

15. (Currently Amended) A compound of claim 10 wherein R is -C(O)OH is in a "para" position; n is 1; Q is CR^1R^2 -W, wherein R^1 and R^2 are independently selected from H and C_1 - C_6 alkyl; or R^1 and R^2 can form a C_3 - C_6 cycloalkyl with the carbon they are attached to; W is selected from hydrogen, propyl, pentyl, substituted C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, and aryl; and pharmaceutically acceptable salts thereof.

- 16. (Currently Amended) A compound of claim 1 that is selected from the group consisting of:
- $4-(2-\{(2R)-2-[(1E,4S)-4-hydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl\}$ ethyl)benzoic acid;
- $4-(2-\{(2R)-2-[(1E,4R)-4-hydroxy-4-(1-propylcyclobutyl)but-1-enyl]-5-oxopyrrolidin-1-yl\}$ ethyl)benzoic acid;
- $4-[2-((2R)-2-\{(1E,4R)-4-[1-(cyclopropylmethyl)cyclobutyl]-4-hydroxybut-1-enyl\}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;$
- 4-(2-{(2R)-2-[(1E,4R)-4-(1-ethylcyclobutyl)-4-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- $4-(2-\{(2R)-2-[(1E,3S)-3-hydroxy-4,4-dimethyloct-1-enyl]-5-oxopyrrolidin-1-yl\}$ ethyl)benzoic acid;
- $4-(2-\{(2S)-2-[(1E,4S)-4-hydroxy-4-ethyloct-1-enyl]-5-oxopyrrolidin-1-yl\}$ ethyl)benzoic acid;
- - $(2-\{(2S)-2-[(1E,4S)-4-hydroxy-4-ethyloct-1-enyl]-5-oxopyrrolidin-1-yl\}$ ethyl)benzoic acid;
- 4 (2-{(2R) 2-[(1E,3S) 3 hydroxyoct 1-en-7-ynyl] 5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- $4-(2-\{(2R)-2-[(1E,3S)-3-hydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl\}\ ethyl) benzamide; \\$
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-4-phenoxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-4-(allyloxy)-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R,7S)-3,7-dihydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid
- 4-(2-{(2R)-2-[(1E,3S,7S)-3,7-dihydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;

Examiner: J. M. Nolan Group Art Unit: 1626

- 4-(2-{(2R)-2-[(1E,3R,7R)-3,7-dihydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E)-3-hydroxy-5-morpholin-4-ylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxyhepta-1,6-dienyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-cyclopropyl-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-4-cyclopentyl-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-cyclopentyl-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-4-cyclopropyl-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-6-methylhept-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-5-methylhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-5,5-dimethylhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-6-cyclopropyl-3-hydroxyhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-5-methoxypent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-5-methoxypent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(5R)-2-oxo-5-[(1E,3S)-6,6,6-trifluoro-3-hydroxyhex-1-enyl]pyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-cyclohexyl-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxypent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxyhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-6-methoxyhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;

Examiner: J. M. Nolan Group Art Unit: 1626

- 4-(2-{(2R)-2-[(1E,3S,7R)-3,7-dihydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-4-(4-chlorophenyl)-3-hydroxy-4-methylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(cyclopropylmethyl)cyclobutyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(cyclopropylmethyl)cyclobutyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-(2-{(2S)-2-[(3S)-3-(1-butylcyclobutyl)-3-hydroxypropyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2S)-2-[(3R)-3-(1-butylcyclobutyl)-3-hydroxypropyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-3-(1-phenylcyclopentyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-3-(1-phenylcyclopentyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(4-chlorophenyl)cyclopropyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(4-chlorophenyl)cyclobutyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(4-chlorophenyl)cyclobutyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(4-chlorophenyl)cyclopropyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-hydroxy-3-[1-(4-methylphenyl)cyclopentyl]prop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-hydroxy-3-[1-(4-methylphenyl)cyclopentyl]prop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-(4-chlorophenyl)-3-hydroxy-4-methylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(4-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(4-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;

Attorney Docket No.: SNI-003US

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4-[2-((2R)-2-{(1E,3R)-3-[1-(2-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
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Examiner: J. M. Nolan

Group Art Unit: 1626

- 4-[2-((2R)-2-{(1E,3S)-3-[1-(2-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(4-chlorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(4-chlorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-4-(3-methylphenyl)but-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-5-phenylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxyhept-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-(3-chlorophenyl)-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-4-phenylbut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2S)-2-[(3R)-3-hydroxy-4-methyl-4-phenylpentyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-4-methyl-4-phenylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-4-methyl-4-phenylpent-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2S)-2-[(3S)-3-hydroxynonyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-[1-(3-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(3-fluorophenyl)cyclopentyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxynon-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3S)-3-hydroxy-3-[1-(2-phenylethyl)cyclobutyl]prop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-hydroxy-3-[1-(2-phenylethyl)cyclobutyl]prop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;

. U.S.S.N. 10/517,626

Attorney Docket No.: SNI-003US

4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-3-(1-propylcyclobutyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid

Examiner: J. M. Nolan

Group Art Unit: 1626

- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-3-(1-propylcyclobutyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid
- 4-(2-{(2R)-2-[(1E,3R)-3-(1-benzylcyclobutyl)-3-hydroxyprop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E)-3-hydroxy-3-methyloct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E)-4-hydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-(1-butylcyclobutyl)-3-hydroxyprop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-(1-butylcyclobutyl)-3-hydroxyprop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-4,4-dimethyloct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-4,4-dimethyloct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-3-(1-phenylcyclopropyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-3-(1-phenylcyclopropyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-5-cyclopentyl-3-hydroxypent-1-enyl]-5-oxopyrrolidin-1-
- yl}ethyl)benzoic acid; and pharmaceutically acceptable salts thereof.

Claim 17. (Cancelled).

- 18. (**Previously Presented**) A method for treating a disease or disorder associated with prostaglandin, comprising administering to a mammal suffering from or susceptible to such a disease or disorder an effective amount of a compound of claim 1.
- 19. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to asthma.

20. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to hypertension.

- 21. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to undesired blood clotting.
- 22. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to infertility or a fertility disorder.
- 23. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to an eosinophil disorder.
- 24. (Original) A method of claim 18 wherein the mammal is suffering from sexual dysfunction.
- 25. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to glaucoma or other disorder involving elevated intraocular pressure.
- 26. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to renal dysfunction.
- 27. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to an immune deficiency disease or disorder.
- 28. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to AIDS.
- 29. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to undesired bone loss.
- 30. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to preterm labor.

31. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to dysmenorrhea.

- 32. (Original) A method of claim 18 wherein the mammal is a female in late stage pregnancy and in need of control of cervical ripening.
- 33. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to preelampsia or eclampsia.
- 34. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to ichthyosis.
- 35. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to dry eye.
- 36. (Original) A method of claim 18 wherein the mammal is suffering from or susceptible to a sleep disorder.
- 37. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to gastric ulcers.
- 38. (Original) A method of claim 18 wherein the mammal is suffering or susceptible to undesired muscle contraction.
- 39. (Original) A method of claim 18 wherein the mammal is suffering or susceptible to inflammatory disorders.
- 40. (**Original**) A method of claim 18 wherein the mammal is suffering from or susceptible to erectile dysfunction.
- 41. (Previously Presented) A method of claim 18 wherein the mammal is a human.
- 42. (Previously Presented) A method of claim 18 wherein the mammal is a female.

43. (Original) A method of claim 42 wherein the female is suffering from or susceptible to infertility.

- 44. (Original) A method of claim 42 wherein the female is suffering from an ovulatory disorder.
- 45. (Previously Presented) A method of claim 18 wherein the mammal is a male.
- 46. (**Previously Presented**) A method for treating a mammal suffering from or susceptible to preterm labor, dysmenorrhea, asthma, hypertension, a fertility disorder, undesired blood clotting, preelampsia, eclampsia, an eosinophil disorder, undesired bone loss, sexual dysfunction, renal dysfunction, an immune deficiency disorder, dry eye, ichthyosis, elevated intraocular pressure, a sleep disorder, or a gastric ulcer, inflammatory disorder, comprising administering to the mammal an effective amount of a compound of claim 1.

Claims 47-48 (Cancelled).

- 49. (**Previously Presented**) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more compounds of claim 1.
- 50. (**Previously Presented**) A pharmaceutical composition of claim 49 wherein the compound is packaged together with instructions for use of the compound to treat preterm labor, dysmenorrhea, asthma, hypertension, infertility or a fertility disorder, sexual dysfunction, undesired blood clotting, a destructive bone disease or disorder, preeclampsia or eclampsia, an eosinophil disorder, renal dysfunction an immune deficiency disorder, dry eye, ichthyosis, elevated intraocular pressure, sleep disorder, or gastric ulcer.
- 51. (Currently Amended) A method of treating a fertility condition in a female, comprising the administration to said female a prostaglandin EP4 receptor agonist, a prodrug thereof or a pharmaceutical acceptable salt of said compound, pro-drug or a diastereoisomeric mixture of said compound; or salt-or pro-drug.

· U.S.S.N. 10/517,626 Attorney Docket No.: SNI-003US

- 52. (Original) A method of claim 51 wherein the condition is infertility.
- 53. (Original) A method of claim 51 wherein the condition is an ovulatory disorder.
- 54. (Previously Presented) A method of claim 51 wherein the female is undergoing an ovulation induction or ART treatments.
- 55. (Currently Amended) A method of claim 51 wherein the prostaglandin EP4 receptor agonist is selected among compounds of formula VI:

Examiner: J. M. Nolan

Group Art Unit: 1626

wherein A is H or OH, preferably H;

B is selected from C_1 - C_6 alkyl, aryl C_1 - C_6 alkyl, aryl C_1 - C_6 heteroalkyl, heteroaryl C_1 - C_6 alkoxy, aryl, heteroaryl, C_3 - C_6 cycloalkyl and C_3 - C_6 heterocycloalkyl, provided that when B is aryl, heteroaryl, C_3 - C_6 cycloalkyl and C_3 - C_6 heterocycloalkyl, the undefined bond linking B is a single bond;

<u>**Tthe**</u> dotted line indicates an optional double bond;

R is C(=O)Z wherein Z is selected from hydrogen, hydroxy, alkoxy, alkyl and aryl; or Z is selected from amino or alkylamine such as $-NR^1R^2$ wherein R^1 and R^2 are independently selected from hydrogen and alkyl, $-NHSO_2R^3$ and $-NHC(O)R^3$ wherein R^3 is selected among C_1 - C_6 alkyl and aryl; or R is heteroaryl;

U is (CH₂)_p wherein p is an integer selected from 0, 1 and 2;

Q is $-CR^4R^5$ -W, wherein R^4 and R^5 are independently selected from H, halogen and C_1 - C_6 alkyl; or R^4 and R^5 can form a C_3 - C_6 cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_3 - C_6 heterocycloalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, C_3 - C_6 heterocycloalkyl C_1 - C_6 alkyl, aryl, heteroaryl, aryl C_1 - C_6 alkyl and heteroaryl C_1 - C_6 alkyl; and pharmaceutically acceptable salts thereof.

- 56. (Original) A method of claim 55 wherein the prostaglandin EP4 receptor agonist is selected among compounds of formula VI, wherein A is H; B is C_1 - C_6 alkyl whereby B is linked by a single bond; R is C(=O)Z wherein Z is selected from hydrogen, hydroxy, alkoxy such as -O-alkyl and alkyl; or Z is selected from amino or alkylamine such as $-NR^1R^2$ where R^1 and R^2 are independently hydrogen or alkyl, $-NHSO_2R^3$ and $-NHC(O)R^3$ wherein R^3 is selected among C_1 . C_6 alkyl and aryl; U is $(CH_2)_p$ wherein p is 0; Q is $-CR^4R^5$ -W, wherein R^4 and R^5 are independently selected from H, halogen and C_1 - C_6 alkyl; W is selected from C_3 - C_6 cycloalkyl, C_3 - C_6 heterocycloalkyl, optionally substituted aryl and heteroaryl; and pharmaceutically acceptable salts thereof.
- 57. (Original) A method of claim 55 wherein the prostaglandin EP4 receptor agonist is selected among compounds of formula VI, wherein A is H; B is C_1 - C_6 alkyl; R is C(=O)Z wherein Z is selected from hydrogen, hydroxy, alkoxy; or R is heteroaryl; U is $(CH_2)_p$ wherein p is 0; Q is $-CH_2$ -W, wherein W is selected from C_3 - C_6 cycloalkyl, C_3 - C_6 heterocycloalkyl, aryl and heteroaryl; and pharmaceutically acceptable salts thereof.
- 58. (**Original**) A method of claim 55 wherein the prostaglandin EP4 receptor agonist is selected among compounds of formula VI, wherein A is H; B is selected from aryl C_1 - C_6 alkoxy, $-CH_2$ -aryl and $-CH_2$ -heteroaryl whereby B is linked by a single bond; R is C(=O)Z wherein Z is selected hydrogen, hydroxy and alkoxy; or R is heteroaryl; U is $(CH_2)_p$ wherein p is 0; Q is $-CH_2$ -W, wherein W is selected from C_3 - C_6 cycloalkyl, C_3 - C_6 heterocycloalkyl, aryl and heteroaryl; and pharmaceutically acceptable salts thereof.
- 59. (Currently Amended) A method of claim 55 wherein the prostaglandin EP4 receptor agonist is selected among compounds of formula VI wherein A is H; B is

· U.S.S.N. 10/517,626 Attorney Docket No.: SNI-003US

substituted aryl whereby B is linked by a single bond; R is C(=O)Z wherein Z is hydroxy; U is $(CH_2)_p$ wherein p is 0; Q is $-CR^4R^5$ -W, wherein R^4 and R^5 are independently selected from H and C_1 - C_6 alkyl; or R^4 and R^5 can form a C_3 - C_6 cycloalkyl with the carbon they are attached to; W is selected from C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, aryl and substituted phenyl; and pharmaceutically acceptable salts thereof.

Examiner: J. M. Nolan

Group Art Unit: 1626

- 60. (Currently Amended) A method of claim 55 wherein the prostaglandin EP4 receptor agonist is selected from the group consisting of:
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-4-phenylbut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-4-(3-chlorophenyl)-3-hydroxybut-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-3-(1-phenylcyclopropyl)prop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-6-cyclopropyl-3-hydroxyhex-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxyhepta-1,6-dienyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-(1-butylcyclobutyl)-3-hydroxyprop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxy-6-methylhept-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-[2-((2R)-2-{(1E,3R)-3-[1-(cyclopropylmethyl)cyclobutyl]-3-hydroxyprop-1-enyl}-5-oxopyrrolidin-1-yl)ethyl]benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxyoct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-(1-butylcyclobutyl)-3-hydroxyprop-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3R)-3-hydroxy-4,4-dimethyloct-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;
- 4-(2-{(2R)-2-[(1E,3S)-3-hydroxynon-1-enyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid; 4-(2-{(2S)-2-[(3R)-3-hydroxy-4-(3-methylphenyl)butyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid;

4-(2-{(2S)-2-[(3R)-3-hydroxy-5-phenylpentyl]-5-oxopyrrolidin-1-yl}ethyl)benzoic acid; and pharmaceutically acceptable salts thereof.

- 61. (New) A method for treating a disease or disorder associated with prostaglandin, comprising administering to a mammal suffering from or susceptible to such a disease or disorder an effective amount of a compound of claim 5.
- 62. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to asthma.
- 63. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to hypertension.
- 64. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to undesired blood clotting.
- 65. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to infertility or a fertility disorder.
- 66. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to an eosinophil disorder.
- 67. (New) A method of claim 61 wherein the mammal is suffering from sexual dysfunction.
- 68. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to glaucoma or other disorder involving elevated intraocular pressure.
- 69. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to renal dysfunction.
- 70. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to an immune deficiency disease or disorder.

71. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to AIDS.

- 72. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to undesired bone loss.
- 73. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to preterm labor.
- 74. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to dysmenorrhea.
- 75. (New) A method of claim 61 wherein the mammal is a female in late stage pregnancy and in need of control of cervical ripening.
- 76. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to preelampsia or eclampsia.
- 77. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to ichthyosis.
- 78. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to dry eye.
- 79. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to a sleep disorder.
- 80. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to gastric ulcers.
- 81. (New) A method of claim 61 wherein the mammal is suffering or susceptible to undesired muscle contraction.

82. (New) A method of claim 61 wherein the mammal is suffering or susceptible to inflammatory disorders.

- 83. (New) A method of claim 61 wherein the mammal is suffering from or susceptible to erectile dysfunction.
- 84. (New) A method of claim 61 wherein the mammal is a human.
- 85. (New) A method of claim 61 wherein the mammal is a female.
- 86. (New) A method of claim 85 wherein the female is suffering from or susceptible to infertility.
- 87. (New) A method of claim 85 wherein the female is suffering from an ovulatory disorder.
- 88. (New) A method of claim 61 wherein the mammal is a male.
- 89. (New) A method for treating a mammal suffering from or susceptible to preterm labor, dysmenorrhea, asthma, hypertension, a fertility disorder, undesired blood clotting, preelampsia, eclampsia, an eosinophil disorder, undesired bone loss, sexual dysfunction, renal dysfunction, an immune deficiency disorder, dry eye, ichthyosis, elevated intraocular pressure, a sleep disorder, a gastric ulcer, or an inflammatory disorder, comprising administering to the mammal an effective amount of a compound of claim 5.
- 90. (New) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more compounds of claim 5.
- 91. (New) A pharmaceutical composition of claim 90 wherein the compound is packaged together with instructions for use of the compound to treat preterm labor, dysmenorrhea, asthma, hypertension, infertility or a fertility disorder, sexual dysfunction, undesired blood clotting, a destructive bone disease or disorder, preeclampsia or eclampsia, an eosinophil disorder, renal dysfunction, an immune deficiency disorder, dry eye, ichthyosis, elevated intraocular pressure, sleep disorder, or gastric ulcer.

92. (New) A method for treating a mammal suffering from or susceptible to preterm labor, dysmenorrhea, a fertility disorder, undesired blood clotting, preelampsia, eclampsia, an eosinophil disorder, undesired bone loss, sexual dysfunction, dry eye, ichthyosis, a sleep disorder, or a gastric ulcer, comprising administering to the mammal an effective amount of a compound of Formula (I):

wherein

A is hydrogen or hydroxy;

B is selected from optionally substituted carbocyclic aryl and optionally substituted heteroalicyclic having from 3 to 8 ring atoms and at least 1 N, O or S ring atom or a heteroaromatic group having a single ring with 5 or 6 ring atoms and at least one N, O or S ring atom;

U is (CH₂)_p wherein p is selected from 0, 1 and 2;

V and Q are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, C_1 - C_6 heteroalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, C_3 - C_6 heterocycloalkyl C_1 - C_6 alkyl, arylalkyl, $-CR^1R^2$ -W, wherein R^1 and

 R^2 are independently selected from H and C_1 - C_6 alkyl; or R^1 and R^2 can form an C_3 - C_6 cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkyl C_1 - C_6 alkyl, aryl and heteroaryl; with at least one of V and Q being other than hydrogen; and pharmaceutically acceptable salts thereof.

93. (New) A method for treating a mammal suffering from or susceptible to preterm labor, dysmenorrhea, a fertility disorder, undesired blood clotting, preelampsia, eclampsia, an eosinophil disorder, undesired bone loss, sexual dysfunction, dry eye, ichthyosis, a sleep disorder, or a gastric ulcer, comprising administering to the mammal an effective amount of a compound of Formula (II):

wherein R is C(=O)Z where Z is selected from hydrogen, hydroxy, optionally substituted alkoxy and optionally substituted alkyl; or R is amino or optionally substituted alkylamine;

II

X is selected from oxygen, sulfur, sulfinyl, sulfonyl and carbon; n is an integer selected from 0, 1, 2, 3, 4 and 5;

U is (CH₂)_p wherein p is selected from 0, 1 and 2;

V and Q are each independently selected from hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, C₁-C₆ heteroalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, C₃-C₆ heterocycloalkyl C₁-C₆ alkyl, arylalkyl and -CR¹R²-W, wherein R¹ and R² are independently selected from H and C₁-C₆ alkyl; or R¹ and R² can form an C₃-C₆ cycloalkyl with the carbon they are attached to;

W is selected from hydrogen, propyl, pentyl, substituted C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkyl C₁-C₆ alkyl, aryl and heteroaryl; with at least one of V and Q being other than hydrogen; and pharmaceutically acceptable salts thereof.